

C L A I M S :

1. A method for generating a mark in the top coating of paper substrates by treating the surface of at least one layer positioned below the top coating with laser energy prior to application of the top coating, wherein the top coating of the paper substrate is opaque and selected from at least one printing and/or at least one paint coating and/or at least one metal coating, or combinations thereof.

2. The method according to claim 1, characterized in that an unpigmented, white or color pigmented coating which may additionally be densified (supercalendered) and optionally be provided with a paint coating is provided immediately below the top coating.

3. The method according to claim 1 or 2, characterized in that a fibrous web, a surface-treated fibrous web, a coated fibrous web which may optionally be treated and/or metal-coated below its coating, or a metal-coated fibrous web which may optionally be treated and/or coated below its metal coating, is treated with laser energy at its surface.

4. The method according to claim 3, characterized in that said optionally surface-treated fibrous web is coated with an unpigmented, white or color pigmented coating which may additionally be densified (supercalendered) and optionally be provided with a paint coating.

5. The method according to one or more of the preceding claims, characterized in that the surface of a fibrous web is treated with laser energy, and at least one further

coating which is selected from printing, paint coating and metal coating is applied to the surface which has been treated with laser energy.

- 5 6. The method according to one or more of the preceding claims, characterized in that the surface of the fibrous web is treated with laser energy, the surface treated with laser energy is metal-coated, and then a printing and/or paint coating is applied to the metal-coated surface.
- 10 7. The method according to one or more of the preceding claims, characterized in that the metal-coated surface of a fibrous web, optionally after applying a paint coating or printing, is treated with laser energy, and then a printing and/or paint coating is applied to the surface which has been treated with laser energy.
- 15 8. The method according to one or more of the preceding claims, characterized in that the surface of a fibrous web which is provided with a coating according to claim 4 is treated with laser energy, and then a printing and/or paint coating is applied to the surface which has been treated with laser energy.
- 20 9. The method according to one or more of the preceding claims, characterized in that the surface of a fibrous web which is provided with a coating according to claim 4 is treated with laser energy, the surface treated with laser energy is metal-coated, and then a printing and/or paint coating is applied to the metal-coated surface.
- 25 10. The method according to one or more of the preceding claims, characterized in that the surface of a fibrous web which is provided with a coating according to claim 4 is metal-coated, the metal-coated surface, which may optionally be provided with a paint coating or printing, is

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treated with laser energy, and then a printing and/or paint coating is applied to the surface which has been treated with laser energy.

- 5 11. The method according to one or more of the preceding claims, characterized in that the surface of a fibrous web is treated with laser energy, the surface treated with laser energy is provided with a coating according to claim 2, and then a printing and/or paint coating is applied.
- 10 12. The method according to one or more of claims 5 to 11, characterized in that said fibrous web is transparent, opaque, white or colored, and optionally has been surface-treated.
- 15 13. The method according to one or more of claims 2 and 8 to 11, characterized in that said coating of the fibrous web is an unpigmented, white or color pigmented coating which may additionally be densified (supercalendered) and may additionally be provided with a paint coating.
- 20 14. The method according to one or more of the preceding claims, characterized in that said metal coating consists of copper, aluminum, gold or silver.
- 25 15. The method according to one or more of the preceding claims, characterized in that said mark is a logotype, a name, a trade mark, an image or a safety marking.
16. The method according to one or more of the preceding claims, characterized in that said paper substrate has a basis weight of from 40 to 400 g/m².
17. A marked paper product, obtainable by a method according to one or more of claims 1 to 16.

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